Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte JOSEPH MELEKIAN

Appeal No. 2005-0993
Application No. 10/056,156

ON BRIEF

Before McQUADE, NASE, and BAHR, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 13, which are all of the claims pending in this application.

We AFFIRM-IN-PART.

BACKGROUND

The appellant's invention relates to a brake shoe assembly, and more particularly to a plurality of radial apertures which provide a moisture escape path (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Strebinger	2,875,859	Mar. 3, 1959
Blatter et al. (Blatter)	3,862,675	Jan. 28, 1975
Young	5,261,512	Nov. 16, 1993

Claims 1 to 3 and 5 to 7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Blatter.

Claims 1, 5 and 9 to 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Strebinger.

Claims 4 and 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Strebinger in view of Young.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the final rejection (mailed April 14, 2003), the answer (mailed October 31, 2003) and the supplemental answer (mailed August 12, 2004) for the examiner's complete reasoning in support of the rejections, and to the brief (filed September 8, 2003) and the reply briefs (filed December 1, 2003 and August 30, 2004) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

The anticipation rejection based on Blatter

We sustain the rejection of claims 1 to 3 and 5 to 7 under 35 U.S.C. § 102(b) as being anticipated by Blatter.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984), it is only necessary for the claims to "'read on' something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or 'fully met' by it."

Claim 1 reads as follows:

> A brake shoe assembly comprising:
> an arcuate brake shoe table defining a plurality of brake shoe table drain openings therethrough; and
> a brake lining matable with said arcuate brake shoe table, said brake lining material defining a plurality of brake lining drain openings therethrough, at least one of said plurality of brake lining drain openings aligned with one of said plurality of brake shoe table drain openings to provide an unobstructed moisture escape path.

Blatter's invention is related to the field of antiskid devices for automotive vehicles, and in particular a system for reducing the amount of friction between a member attached to the rotating wheel and the nonrotating brake pad in response to control logic indicating that a particular wheel or set of wheels are skidding or

approaching a skid condition. Figure 2 is an illustration of the antiskid system applied to a drum braking system. The vehicle's pressurized brake system is activated by a control element, illustrated as a foot pedal 16, which the operator depresses when he desires to stop the vehicle. The mechanical force applied to the foot pedal is communicated to a brake pressure generator 30 which may be a direct mechanical-to-pressure converter or may be anyone of the several power assisted systems well known in the art. The pressure generator 30 in response to actuation of the foot pedal 16 increases the pressure in a brake cylinder 32 urging an internal piston (not shown) to move outwardly displacing a brake shoe 34 toward the brake drum 36 by means of a mechanical link 38. The drum 36 is fixedly attached to the wheel and rotates therewith while the shoe 34 is pivotably attached to a stationary element of the wheel assembly, such as the axle housing, and has a stationary relationship to the rotating wheel. Displacement of the shoe 34 causes a brake pad (or lining) 40 fixedly attached to the shoe 34 to frictionally engage the rotating drum 36. The friction caused by the engagement of the pad with the drum absorbs the energy of the rotating wheel causing the rotational speed of the wheel, and therefore the vehicle, to slow down.

Blatter's system includes a control logic 14 that responds to signals generated by wheel sensors 12 indicative of the rotational speed of each wheel, senses an imminent

skid condition by any of the several techniques known in the art, and generates an electrical signal communicated to a control valve, illustrated as a solenoid valve 42 associated with the wheel in or in danger of skidding. The valve 40 controls the flow of a pressurized fluid, which may be either a gas or a liquid through a passageway 44 formed through the brake shoe 34 and brake pad 40 to the interface 50 between the brake pad 40 and the brake drum 36. The pressurized fluid is derived from pressurized fluid source which may be static pressurized fluid supply, or may comprise a compressor 46 and accumulator 48 as illustrated in Figure 2. The pressure of the fluid in the pressurized source must exceed the maximum pressure that can be applied to the brake shoe by the pressurized braking system by a predeterminable pressure dependent upon the mechanical configuration of the brake system.

Actuation of Blatter's valve 42 in response to a signal from the control logic 14 injects the pressurized fluid between the drum and the pad. The fluid circulates across the entire face of the pad due to wear grooves and the rotation of the drum 36. This circulation combined with the dynamic wedge effect commonly observed in journal bearings will cause the pad to rise slightly against the force generated by the piston in brake cylinder 32 reducing the contact area between these two elements. The pads will

ride on the fluid film which forms an almost frictionless fluid bearing as long as fluid is being interjected into the interface.

Figures 3 and 4 of Blatter illustrate two possible configurations of the fluid passage 44 through the brake pad 40. In Figure 3, the passage 44 is illustrated as a narrow slit 52. Alternatively, as illustrated in Figure 4, the passage 44 may be a series of small holes 54. The holes 54 may be disposed along a straight line or staggered to increase the mechanical strength of the pad 40 in the immediate area surrounding the fluid passage.

The appellant argues that claim 1 is not anticipated by Blatter since Blatter fails to disclose an unobstructed moisture escape path. We do not agree. In our view, Blatter's fluid passage 44 as shown in Figure 2 includes one brake pad opening aligned with one brake shoe opening providing an unobstructed moisture escape path. The path provided by the aligned openings in Blatter's brake pad 40 and brake shoe 34 is unobstructed with the path open to atmosphere at one end and at the other end being connected by a conduit to the solenoid valve 42.[1] It is our opinion that moisture is

[1]We note that dependent claim 10 adds to parent claim 1 the further limitation "wherein said unobstructed moisture escape path is open to atmosphere on both ends." Under the doctrine of claim differentiation (i.e., each claim in an application is

(continued...)

inherently capable of escaping along Blatter's unobstructed path and as such Blatter discloses an unobstructed moisture escape path.

For the reasons set forth above, the decision of the examiner to reject claim 1 under 35 U.S.C. § 102(b) is affirmed.

The decision of the examiner to reject claims 2, 3 and 5 to 7 under 35 U.S.C. § 102(b) is also affirmed since the appellant has not argued separately the patentability of any particular claim apart from the others, thus allowing claims 2, 3 and 5 to 7 to fall with claim 1 (see In re Young, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); In re Wood, 582 F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978)).

The anticipation rejection based on Strebinger

We will not sustain the rejection of claims 1, 5 and 9 to 13 under 35 U.S.C. § 102(b) as being anticipated by Strebinger.

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[1](...continued)
presumptively different in scope), claim 1 does not require that both ends of the unobstructed moisture escape path are open to atmosphere.

Strebinger discloses in Figures 5 to 7 a brake shoe having a rim 20a, a transverse strengthening web 22a and a plurality of spaced apart lining strips or segments 24a arranged transversely on rim 20a. A plurality of openings 30 are provided in the rim 20a to promote circulation of air through the brake and across the drum surface, to promote cooling of the brake.

The appellant argues that claims 1, 5 and 13 are not anticipated by Strebinger since Strebinger fails to disclose a brake lining material defining a plurality of brake lining drain openings therethrough. We agree. In our view, the gaps between Strebinger's spaced apart lining strips or segments 24a are not openings through a brake lining material. As such, claims 1, 5 and 13 are not anticipated by Strebinger.

For the reasons set forth above, the decision of the examiner to reject independent claims 1, 5 and 13, and claims 9 to 12 dependent thereon, under 35 U.S.C. § 102(b) is reversed.

The obviousness rejection

We have reviewed the reference to Young applied in the rejection of dependent claims 4 and 8 but find nothing therein which makes up for the deficiency of Strebinger discussed above regarding parent claims 1 and 5. Accordingly, we cannot sustain the

examiner's rejection of appealed claims 4 and 8 under 35 U.S.C. § 103 as being unpatentable over Strebinger in view of Young.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 3 and 5 to 7 under 35 U.S.C. § 102(b) as being anticipated by Blatter is affirmed; the decision of the examiner to reject claims 1, 5 and 9 to 13 under 35 U.S.C. § 102(b) as being anticipated by Strebinger is reversed; and the decision of the examiner to reject claims 4 and 8 under 35 U.S.C. § 103 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JOHN P. McQUADE Administrative Patent Judge	)	
JEFFREY V. NASE Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)	

CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

JVN/jg